54. A computer memory containing a purchasing opportunity ranking data structure, comprising a plurality entries, each entry comprising an indication of a purchasing opportunity and an indication of a purchasing opportunity score indicating a level of similarity between the purchasing opportunity and a selected purchasing opportunity.

55. The computer memory of claim 54 wherein the purchasing opportunity score indicated by each entry is based upon inverse document frequency scores of terms occurring both in information describing the purchasing opportunity of the entry and in information describing the selected purchasing opportunity.

REMARKS

Claims 1-55 are presently pending in the subject application. In the non-final Office Action mailed November 18, 2002, the Examiner rejected claims 2-10, 17-38 and 42-55 under 35 U.S.C. § 101; rejected claim 1 under 35 U.S.C. § 112, first paragraph, and claims 1-41 under 35 U.S.C. § 112, second paragraph; and rejected claims 1-55 under 35 U.S.C. § 103(a) over Amazon.com, in view of U.S. Patent No. 5,848,407 to Ishikawa et al. ("Ishikawa") and U.S. Patent No. 6,212,517 to Sato et al. ("Sato"). By this response, applicant amends claims 2, 37, 41, 42, 43, 46 and 49. As detailed below, applicant submits that all of the pending claims are in condition for allowance.

Applicant wishes to thank the Examiner for the December 13, 2002, telephone interview, during which applicant's representatives raised the issue of the adequacy of the Amazon.com reference as prior art. As discussed during the telephone interview, applicant herein presents a written argument explaining why the Amazon.com reference should not be considered prior art.

I. **Objection to drawings under 37 C.F. § 1.83(a)**

The Examiner objected to the drawings as failing to comply with 37 C.F.R. § 1.83(a).

Applicant disagrees with the Examiner's assertions that the drawings do not show every feature of claim 1. Figure 2 shows a representative window displayed by the facility. This representative window 200 illustrates displaying information about auctions (representative of both displaying steps associated with claim 1). Figure 2 also illustrates a "see similar auctions" button 223 that can be used to receive user input requesting information about other auctions. Additionally, blocks 301-307 of Figure 3 illustrate determining the inverse document frequency of terms occurring within the description of a first item. Accordingly, the drawings show all the features of claim 1.

To address Examiner's concern that the drawings do not show every feature of claims 7-19, applicant has amended Figure 3 to include block 300, illustrating examples of selecting a distinguished purchasing opportunity in response to various forms of user action. Applicant also notes that Table 1 on page 7 and Table 2 on page 8 of the Specification provide additional illustrative description for the subject matter of claims 11-19.

Applicant disagrees with the Examiner's assertions that the drawings do not show every feature of claims 34 and 36. Figure 4 illustrates examples of descriptive information relating to <u>size</u> (e.g., "10-inch" circular saw 403) and style (e.g., "Archie and Jughead" <u>style</u> salt and pepper shakers).

To address the Examiner's concern that the drawings do not show every feature of claims 25, 26, 30-33 and 35, applicant has amended Figure 4 to illustrate the following examples of descriptive information: seller location (claim 25); item availability (claim 26); publisher (claim 30); author (claim 31); artist (claim 32); performer (claim 33); color (claim 35). The amendments to Figure 4 do not add new matter and are supported in the Specification at, for example, 2:20-26.

To address Examiner's concern that the drawings do not show every feature of claim 41, applicant has amended block 162 of Figure 1 to include a term score selection subsystem 164, a key word selection subsystem 165 and a purchasing

opportunity identification subsystem 166. The amendments to Figure 1 do not add new matter and are supported in the Specification at, for example, 2:24-4:2.

Applicants disagree with the Examiner's assertion that the drawings do not show every feature of claims 54 and 55. Block 173 of Figure 1 shows a persistent storage device (e.g., memory). Figure 4 illustrates an example of a purchasing opportunity table that may be used by the facility. Tables 1 and 2 show examples of a mapping of a purchasing opportunity and a purchasing opportunity score using, for example, an inverse document frequency technique.

In accordance with the amendments to the drawings described above, applicant files concurrently herewith a Request for Approval of Drawing Change.

II. Rejections under 35 U.S.C. § 101

The Examiner rejected claims 2-10, 17-38, and 42-55 under 35 U.S.C. § 101. Applicant respectfully traverses this rejection.

A. Claims 2-36 and 42-47

The Examiner asserts that claims 2-36 and 42-47 are not tangible because they are "drawn to a method of merely manipulating data with no claimed output." While applicant does not agree with the Examiner's assertion, applicant has addressed the Examiner's concern by amending independent claims 2 and 42 to include a "displaying" element.

B. Claims 37-40 and 48-53

The Examiner asserts that claims 37-40 and 48-53 are not tangible because they are drawn to a method of merely manipulating data with no claimed output. Applicant disagrees.

Section 2106 of the MPEP, entitled "Patentable Subject Matter – Computer-Related Inventions," states the following:

> When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to

the medium and **will be statutory** in most cases since use of technology permits the function of the descriptive material to be realized.

MPEP § 2106 (edition 8).

Claims 37-40 recite a "<u>computer-readable medium</u> whose contents cause a computer system to identify purchasing opportunities within a set of purchasing opportunities that are similar to a distinguished purchasing opportunity." Similarly, claims 48-53 recite a "computer-readable medium whose contents cause a computer system to identify documents in a set of documents relevant to a distinguished document." Accordingly, even if the elements of claims 37-40 and 48-53 are merely "functional descriptive material," because these claim elements are recorded on a computer-readable medium, claims 37-40 satisfy the statutory requirements of 35 U.S.C. § 101.

C.   Claim 41

The Examiner asserts that claim 41 is not tangible because it is drawn to a method of merely manipulating data with no claimed output. Applicant disagrees.

Section 2106 of the MPEP states the following:

> If a claim defines a useful machine or manufacture by identifying the physical structure of the machine or manufacture in terms of its hardware or **hardware and software combination**, it defines a statutory product. See, e.g., *Lowry*, 32 F.3d at 1583, 32 USPQ2d at 1034-35; *Warmerdam*, 33 F.3d at 1361-62, 31 USPQ2d at 1760.

MPEP § 2106 (edition 8).

Claim 41 now recites a "data processing system comprising a <u>hardware and software combination</u> for scoring purchasing opportunities within a set of purchasing opportunities in terms of their similarity to a distinguished purchasing opportunity." Accordingly, claim 41 satisfies the statutory requirements of 35 U.S.C. § 101.

D.   Claims 54-55

The Examiner asserts that claims 54 and 55 are "drawn to a data construct," and are therefore non-statutory. Applicant disagrees.

Section 2106 of the MPEP explicitly states that computer-readable medium encoded with a data structure is statutory subject matter:

> Data structures not claimed as embodied in computer-readable media are descriptive material *per se* and are not statutory because they are not capable of causing functional change in the computer. See, e.g., *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure *per se* held nonstatutory).... **In contrast, a claimed computer-readable medium encoded with a data structure** defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and **is thus statutory**.

MPEP § 2106 (edition 8).

Claims 54 and 55 recite a "computer memory containing a purchasing opportunity ranking data structure." Since a computer memory is one type of computer-readable medium that can be encoded with a data structure, claims 54 and 55 satisfy the statutory requirements of 35 U.S.C. § 101.

II. Rejections under 35 U.S.C. § 112, first paragraph

The Examiner rejected claim 1 under 35 U.S.C. § 112, first paragraph. Applicant respectfully traverses this rejection.

The Examiner asserts that claim 1 contains subject matter that was not described in the specification in such a way as to enable one skilled in the art to make and/or use the invention because "the claim method cannot identify that the item is the same as the one identified. Rather it can only predict a similarity based on similar keywords." Applicant disagrees.

Claim 1 recites "identifying as an auction offering an item that is the same as the first item an auction among the found auctions where the sum of the inverse document frequencies of the selected terms that occur in the item description for the auction exceeds a threshold." In this way, an auction that has an inverse document frequency value that exceeds a certain threshold can be identified as an auction "offering an item that is the same as the first item." This identification can occur even if the item is not exactly the same as the first item. Thus, contrary to the Examiner's position, the

claimed technique is not the same as "identifying that the item is the same as the one identified." In addition, enabling descriptive text found throughout the Specification supports applicant's claim language. (See e.g., Specification at 2-14-4:2 and 5:12-14).

III.   Rejections under 35 U.S.C. § 112, second paragraph

The Examiner rejected claims 1-41 under 35 U.S.C. § 112, second paragraph. Applicant respectfully traverses this rejection.

With respect to claim 1, the term "the auction" in line 18 refers to one instance of the "for each auction" term found in the same element. Accordingly, claim 1 is not indefinite.

To address the Examiner's concerns regarding the "identifying purchase opportunities of the set containing key words" elements of claims 2, 37 and 41 applicant has amended claims 3, 37 and 41 to recite "identifying purchase opportunities of the set containing one or more key words."

In addition, applicant has amended claim 41 to replace the term "purchasing opportunity score" with the term "scoring subsystem." This amendment addresses the Examiner's concern regarding "whether applicant intended to claim the combination or the subcombination."

IV.   Rejections under 35 U.S.C. § 103

The Examiner rejected claims 1-55 under 35 U.S.C. § 103(a) as being unpatentable over Amazon.com in view of Ishikawa and Sato. Applicant respectfully traverses this rejection.

Although the Examiner relies on a collection of Amazon.com web pages to reject the claims under 35 U.S.C. § 103(a), the Examiner does not attribute a particular publication date to these web pages, as required by 37 C.F.R. § 1.104. The same is true for the Yahoo.com reference that was cited by the Examiner but not specifically relied upon. Moreover, the 1996-2001 copyright mark shown on one of the Amazon.com web pages provided by the Examiner indicates a 2001 date for these web

pages, which is clearly later applicant's March 30, 2000, filing date. Accordingly, the Amazon.com web pages have not been adequately demonstrated to be prior art, making the rejection based on the Amazon.com reference improper.

In view of the foregoing, the claims pending in the application comply with the requirements of 35 U.S.C. § 112 and patentably define over the prior art. A Notice of Allowance is, therefore, respectfully requested. If the Examiner has any questions or believes a telephone conference would expedite prosecution of this application, the Examiner is encouraged to call the undersigned at (206) 264-6373.

Respectfully submitted,

Perkins Coie LLP

Date: 3/17/03
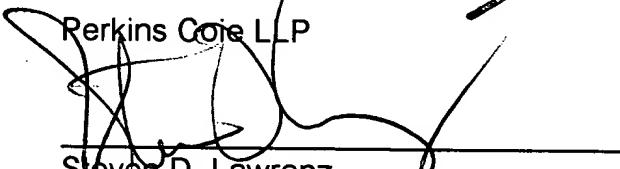
Steven D. Lawrenz
Registration No. 37,376

Correspondence Address:
Perkins Coie LLP
P.O. Box 1247
Seattle, Washington 98111-1247

APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

(Specification at 4:11-21)

The server computer system 150 contains a memory 160. The memory 160 preferably includes auction software 161 incorporating the facility 162, as well as a web server computer program 163 for delivering web pages in response to requests from web clients. <u>The facility 162 may include a term score selection subsystem 164, a key word selection subsystem 165 and a purchasing opportunity identification subsystem 166.</u> While items 161-163 are preferably stored in memory while being used, those skilled in the art will appreciate that these items, or portions of them, may be transferred between memory and a persistent storage device 172 for purposes of memory management and data integrity. The server computer system further contains one or more central processing units (CPU) 171 for executing programs, such as programs 161-163, and a computer-readable medium drive 173 for reading information or installing programs such as the facility from computer-readable media, such as a floppy disk, a CD-ROM, or a DVD.

(Specification at 5:15-6:2)

Figure 3 is flow diagram showing the steps preferably performed by the facility in order to score the similarity of other purchasing opportunities to a distinguished purchasing opportunity, such as the auction described by information 210. <u>In step 300, the facility selects at least one distinguished item based on some user activity (e.g., requesting display of item information; exercising purchasing opportunity, purchasing item, placing bid, etc.).</u> In step 301, the facility selects terms in the description of the distinguished item or items having the highest inverse document frequencies. In various embodiments, terms are selected from various combinations of fields 210. Steps 302-304 constitute a loop that is repeated for each term selected as a key word in step 301. In step 303, the facility conducts a search for purchasing opportunities whose item descriptions contain the selected term. In step 304, if additional selected terms remain, then the

facility continues in step 302 to process the next selected term. Steps 305-308 constitute a loop that is repeated for each purchasing opportunity found in at least one of the searches conducted in step 303. In step 306, the facility determines which selected terms occur in the item description for the purchasing opportunity. In step 307, the facility determines a score for the purchasing opportunity by summing the inverse document frequencies of any of the selected terms that occurred in the item description for the purchasing opportunity. In step 308, if additional purchasing opportunities remain, then the facility continues in step 305 to process the next purchasing opportunity. After step 308, the steps conclude.

In the Claims:

2. (Amended) A method in a computer system for identifying purchasing opportunities within a set of purchasing opportunities that are similar to a distinguished purchasing opportunity, the distinguished purchasing opportunity having descriptive information associated with it, comprising:

for each of a plurality of terms occurring in the descriptive information associated with the distinguished purchasing opportunity, generating a term score reflecting the extent to which the occurrence of the term in the descriptive information associated with the distinguished purchasing opportunity differentiates the distinguished purchasing opportunity from other purchasing opportunities in the set;

selecting as key words a plurality of terms having the highest term scores;

identifying purchasing opportunities of the set containing <u>one or more</u> key words;-and

establishing a purchasing opportunity score for each identified purchasing opportunity by summing the term score of the <u>one or more</u> key words occurring in descriptive information associated with the identified purchasing opportunities<u>; and</u>

<u>displaying information about one or more of the identified purchasing opportunities</u>.

37. <u>(Amended)</u> A computer-readable medium whose contents cause a computer system to identify purchasing opportunities within a set of purchasing opportunities that are similar to a distinguished purchasing opportunity, the distinguished purchasing opportunity having descriptive information associated with it, by:

for each of a plurality of terms occurring in the descriptive information associated with the distinguished purchasing opportunity, generating a term score reflecting the extent to which the occurrence of the term in the descriptive information associated with the distinguished purchasing opportunity differentiates the distinguished purchasing opportunity from other purchasing opportunity in the set;

selecting as key words a plurality of terms having the highest term scores;

identifying purchasing opportunities of the set containing <u>one or more</u> key words; and

establishing a purchasing opportunity score for each identified purchasing opportunity by summing the term score of the <u>one or more</u> key words occurring in information associated with the identified purchasing opportunities.

41. <u>(Amended)</u> A data processing system <u>comprising a hardware and software combination</u> for scoring purchasing opportunities within a set of purchasing opportunities in terms of their similarity to a distinguished purchasing opportunity, the distinguished purchasing opportunity having descriptive information associated with it, <u>the system</u> comprising:

a term score generator that, for each of a plurality of terms occurring in the descriptive information associated with the distinguished purchasing opportunity, generates a term score reflecting the extent to which the occurrence of the term in the descriptive. information associated with the distinguished purchasing opportunity differentiates the distinguished purchasing opportunity from other purchasing opportunity in the set;

a key word selection subsystem that selects as key words a plurality of terms having the highest term scores;

a purchasing opportunity identification subsystem that identifies purchasing opportunities of the set containing <u>one or more</u> key words; and

a purchasing opportunity ~~score~~ scoring subsystem that establishes a purchasing opportunity score for each identified purchasing opportunity by summing the term score of the <u>one or more</u> key words occurring in information associated with the identified purchasing opportunities.

42.   (Amended) A method in a computer system for identifying documents in a set of documents relevant to a distinguished document, comprising:

identifying key words within the distinguished document; ~~and~~

ranking documents of the set based upon which of the identified key words they contain<u>; and</u>

<u>displaying information about one or more of the ranked documents</u>.

43.   (Amended) The method of claim 42 further comprising performing a separate search for each of the identified ~~keywords~~<u>key words</u>.

46.   (Amended) The method of claim 42 wherein the distinguished and ranked elements each describe a purchasing opportunity<u>.</u>

49.   (Amended) The computer-readable medium of claim 48 wherein the contents of the computer-readable medium further cause the computer system to perform a separate search for each of the identified ~~keywords~~<u>key words</u>.